

CLAIM AMENDMENTS

Please amend the claims as described below. In accordance with 37 CFR §1.121, a complete listing of all claims in the application is provided below. Notably, the status of each claim is indicated in the parenthetical expression adjacent to the corresponding claim number.

Claims 1-35 (Canceled).

1 36. (Previously Presented) An electromechanical device comprising:
2 a substrate;
3 a mechanical structure disposed over the substrate wherein a monolayer or self-
4 assembled layer is disposed on at least a portion of the mechanical structure;
5 a film encapsulation structure, disposed over the mechanical structure, to define and
6 seal a chamber;
7 an anti-stiction channel, etched into the film encapsulation structure, to provide
8 access to at least a portion of the mechanical structure disposed in the chamber; and
9 an anti-stiction plug, disposed over or in the anti-stiction channel, to re-seal the
10 chamber.

1 37. (Previously Presented) The device of claim 36 wherein the film encapsulation
2 structure includes first and second encapsulation layers.

1 38. (Currently Amended) The device of claim 37 wherein the first encapsulation
2 layer includes ~~is comprised of~~ polycrystalline silicon, porous polycrystalline silicon,

3 amorphous silicon, silicon carbide, silicon nitride, silicon/germanium, germanium, or gallium
4 arsenide.

1 39. **(Currently Amended)** The device of claim 37 wherein the second
2 encapsulation layer includes ~~is comprised of~~ polycrystalline silicon, porous polycrystalline
3 silicon, amorphous silicon, germanium, silicon/germanium, gallium arsenide, or silicon
4 carbide.

1 40. **(Previously Presented)** The device of claim 36 wherein the anti-stiction plug
2 includes spin-on polymer, SOG or a metal material.

1 41. **(Previously Presented)** The device of claim 36 wherein the anti-stiction plug
2 includes spin-on polymer or SOG which is deposited using silk screening.

1 42. **(Previously Presented)** The device of claim 36 wherein the anti-stiction plug
2 includes spin-on polymer or SOG which is deposited using dispensed seal-glass, plastic
3 and/or epoxy.

1 43. **(Previously Presented)** The device of claim 36 wherein the anti-stiction plug is
2 deposited using a shadow mask technology.

1 44. **(Previously Presented)** The device of claim 36 further including a trap,
2 disposed between the anti-stiction channel and the mechanical structure.

1 45. (Previously Presented) The device of claim 44 wherein the trap is a
2 substantially vertical trap.

1 46. (Previously Presented) The device of claim 44 wherein the trap is a
2 substantially horizontal trap.

1 47. (Currently Amended) The device of claim 36 ~~35~~ further including a diffusion
2 barrier disposed over the anti-stiction plug.

1 48. (Currently Amended) The device of claim 47 wherein the diffusion barrier
2 includes ~~is comprised of~~ a metal material.

1 49. (Previously Presented) An electromechanical device comprising:
2 a substrate;
3 a mechanical structure disposed over the substrate wherein a monolayer or self-
4 assembled layer is disposed on at least a portion of the mechanical structure;
5 a wafer bonded encapsulation structure, disposed over the mechanical structure, to
6 define and seal a chamber;
7 an anti-stiction channel, etched into the substrate, to provide access to at least a
8 portion of the mechanical structure disposed in the chamber; and
9 an anti-stiction plug, disposed over or in the anti-stiction channel, to re-seal the
10 chamber.

1 **50. (Previously Presented)** The device of claim 49 wherein the encapsulation
2 structure is secured over the mechanical structure using anodic bonding.

1 **51. (Previously Presented)** The device of claim 49 wherein the encapsulation
2 structure includes an anodic shield.

1 **52. (Previously Presented)** The device of claim 49 wherein the encapsulation
2 structure includes an insulation layer which is disposed on a cap wafer.

1 **53. (Previously Presented)** The device of claim 49 wherein the anodic shield is
2 disposed on the insulation layer.

1 **54. (Previously Presented)** The device of claim 49 wherein the anti-stiction plug
2 includes spin-on polymer, SOG or a metal material.

1 **55. (Previously Presented)** The device of claim 49 wherein the anti-stiction plug
2 includes spin-on polymer or SOG which is deposited using silk screening.

1 **56. (Previously Presented)** The device of claim 49 wherein the anti-stiction plug
2 includes spin-on polymer or SOG which is deposited using dispensed seal-glass, plastic
3 and/or epoxy.

1 **57. (Previously Presented)** The device of claim 49 wherein the anti-stiction plug is
2 deposited using a shadow mask technology.

1 **58. (Previously Presented)** The device of claim 49 further including a trap,
2 disposed between the anti-stiction channel and the mechanical structure.

1 **59. (Previously Presented)** The device of claim 58 wherein the trap is a
2 substantially vertical trap.

1 **60. (Previously Presented)** The device of claim 58 wherein the trap is a
2 substantially horizontal trap.

1 **61. (Previously Presented)** The device of claim 49 further including a diffusion
2 barrier disposed over the anti-stiction plug.

3 **62. (Currently Amended)** The device of claim 61 wherein the diffusion barrier
4 includes ~~is comprised of~~ a metal material.

1 **63. (NEW)** An electromechanical device comprising:
2 a substrate;
3 a mechanical structure disposed over the substrate wherein an anti-stiction layer is
4 disposed on at least a portion of the mechanical structure;

5 a film encapsulation structure, disposed over the mechanical structure, to define a
6 chamber;
7 an anti-stiction channel, formed in the film encapsulation structure, to allow the anti-
8 stiction layer to be disposed on at least the portion of the mechanical structure disposed in
9 the chamber; and
10 an anti-stiction plug, disposed over or in the anti-stiction channel, to re-seal the
11 chamber.

1 64. (NEW) The device of claim 63 wherein the film encapsulation structure
2 includes first and second encapsulation layers.

1 65. (NEW) The device of claim 64 wherein the first encapsulation layer includes
2 polycrystalline silicon, porous polycrystalline silicon, amorphous silicon, silicon carbide,
3 silicon nitride, silicon/germanium, germanium, or gallium arsenide.

1 66. (NEW) The device of claim 64 wherein the second encapsulation layer
2 includes polycrystalline silicon, porous polycrystalline silicon, amorphous silicon,
3 germanium, silicon/germanium, gallium arsenide, or silicon carbide.

1 67. (NEW) The device of claim 63 wherein the anti-stiction plug includes spin-on
2 polymer, SOG or a metal material.

1 68. (NEW) The device of claim 63 wherein the anti-stiction plug includes spin-on
2 polymer or SOG which is deposited using silk screening.

1 69. (NEW) The device of claim 63 wherein the anti-stiction plug includes spin-on
2 polymer or SOG which is deposited using dispensed seal-glass, plastic and/or epoxy.

1 70. (NEW) The device of claim 63 wherein the anti-stiction plug is deposited using
2 a shadow mask technology.

1 71. (NEW) The device of claim 63 further including a trap, disposed between the
2 anti-stiction channel and the mechanical structure.

1 72. (NEW) The device of claim 71 wherein the trap is a substantially vertical trap.

1 73. (NEW) The device of claim 71 wherein the trap is a substantially horizontal
2 trap.

1 74. (NEW) The device of claim 71 wherein the trap includes a substantially
2 horizontal portion and a substantially vertical portion.

1 75. (NEW) The device of claim 63 further including a diffusion barrier disposed
2 over the anti-stiction plug.

1 76. (NEW) The device of claim 75 wherein the diffusion barrier is a metal layer.

1 77. (NEW) The device of claim 63 wherein the anti-stiction layer is a monolayer or
2 self-assembled layer.